Chapter 11

THE ROAD COMMUNICATION SYSTEM

ROAD TRANSPORT GENERALLY

In the financial year 1951-52, the people of Victoria spent about £258,000,000 on transport, either directly or as part of the cost of commodities. Road transport charges accounted for 85% of this total, so that nearly 25% of the people's annual income of £900,000,000 went on road transport costs. Although in the year 1952-53 the proportion was probably slightly less, the long-term trend is for road transport costs to become an increasingly important factor in our economy.

In 1951-52 the cost of road transport within the Melbourne metropolitan area, including privately-owned buses, was estimated at £112,000,000, of which approximately £92,000,000 represented the cost of moving materials and goods and people engaged in production, and about £20,000,000 the cost of transport for pleasure. Divided among all the wage-earners of the metropolitan area, the cost of the essential movement of goods and people by road transport was, therefore, about $\pounds 2/18/-$ a week for every wage-earner whether he owned a motor car or not. This expenditure represented approximately 74% of the cost of all transport, the remainder being made up of railway transport 21% and Tramway Board vehicles 5%. The amount spent on transport for pleasure represents an average additional cost of about £2 a week for each owner of a private motor car.

This question is discussed in more detail in "Surveys and Analysis," but these few facts emphasise the important part which transport in general and road transport in particular plays in the national economy.

Everyone who has ridden in a motor or other vehicle on our roads is aware of the great loss of time by delays. It has been estimated that the time lost in merely stopping and immediately restarting a motor vehicle, without any other delay, is equal to that taken in moving a quarter of a mile at normal speed. Such delays measured in fuel and time over a year, or even over a month, total an enormous sum of money which, included in the cost of goods and services, affects our standard of living. Any reduction of this waste must ultimately be of considerable economic value to the community. Another factor of material importance in road transport is the high frequency of traffic accidents. Apart from the suffering and anguish of the victims and their families, traffic accidents represent loss to the community as a whole.

The key to reduction in the cost of road transport is a properly designed and adequately controlled road communication system which will permit safe, reasonably rapid and uninterrupted movement of traffic from point to point throughout the metropolitan area. To achieve this the road system must be planned on a metropolitan and not a local municipal basis, and with proper regard to the volumes of traffic likely to use the roads as the population increases and motor vehicles are used more extensively.

In its 1929 report the Metropolitan Town Planning Commission pointed out the need for an authority to undertake responsibility for main metropolitan roads, and it suggested alternative means of achieving this. Nothing was done, however, and within the urban area each individual municipal council is still solely responsible for all main and local roads within its territory. There is no authority responsible for planning and developing the main road system and of studying and co-ordinating the present and future needs of the city for road transport. The Country Roads Board, as its name implies, is a country road authority, and its responsibilities cease at the outskirts of the urban area.

Main metropolitan roads constitute the only large community service for which there is no single authority responsible for planning, construction, maintenance and control. For this reason, before decisions could be made as to what reservations should be provided in the planning scheme for road improvements and for new roads, it was necessary to prepare a comprehensive plan for a main road system based on the estimated needs of the city of the future. The planning staff had to carry out a great deal of work which normally would be the responsibility of a main roads authority. It was necessary not only to develop a road system adequate for the needs of the expanding city, but to estimate the traffic which the various roads may be expected to carry in the future so that reservations of sufficient but not excessive width could be made. This is particularly important in an urban area where the cost of



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additional land will often be heavy. The investigations which were made to this end are recorded in "Surveys and Analyses."

TRAFFIC AND ROAD CAPACITIES

Diagram 9 shows the steady and continuous increase in the use of motor vehicles during the past 30 years as reflected by motor registrations. The influence of the high rate of increase on road traffic is illustrated by the figures of Table 7, which are based on traffic census results for the inner city area for the years 1924, 1926 and 1947, together with estimates from sample counts made in 1951. During this period the percentage of horse-drawn vehicles decreased from 34% in 1924 to 0.3% in 1951.

Table 7

TOTAL VEHICULAR TRIPS ACROSS BOUNDARIES OF CENTRAL BUSINESS AREA IN TWELVE HOURS

Year	Vehicular Trips
1924	96,000
1926	125,000
1947	186,000
1951	298,000

In order to estimate the traffic that is likely to use the proposed road system in the future, it was necessary to study the characteristics of the various types of traffic and the places of origin and destination.

Road traffic may be classified into four broad groups:

- (i) Worker traffic comprising vehicles used to carry wage-earners between their homes and their work.
- (ii) Industrial and commercial traffic associated with the manufacture and distribution of goods, including vehicles used both for transporting materials and goods and for carrying personnel in the course of their industrial and commercial activities.
- (iii) Shopper traffic, consisting of vehicles used for shopping purposes.
- (iv) *Recreational traffic*, resulting from the recreational activities of the community.

Detailed studies were made to determine the probable volume of traffic which will use the various road routes in the future, and the probable variations in the rate of traffic flow so that the conditions at peak periods can be estimated.

Broadly these studies showed that, when our population reaches 2,000,000, the traffic in central parts of the city will be about twice what it is today, and when there are 2,500,000 people it will be approaching three times its present volume. In the suburban areas, where new industrial and residential development will have a greater effect, the relative increase is likely to be still more. The principal roads of the metropolitan area were reserved in the original subdivision of Crown Lands, and the reservations were made for roads to serve a class of traffic materially different from that of today. Therefore, it is not surprising that there are many deficiencies in the capacity of the existing road system to meet present-day needs.

It must be pointed out, however, that much better use could be made of the existing roads. Uniformity of regulations and controls, specialised study of road problems, and relatively inexpensive improvements could increase their carrying capacity. But even if all this were done, some portions of the road system as it exists today would still be inadequate for the needs of the city. If not adequate today, what then is likely to be the position in the future with increased population and greater use of motor vehicles?

This gives point to the conclusion that one of the greatest needs of a modern city, and Melbourne is no exception, is a well-planned, well-designed and well-constructed road system capable of meeting all the reasonable demands which which may be placed on it. Not only will this prove a great convenience to the residents, but by reducing the heavy toll of road accidents and by giving greater freedom of movement to road transport, it would have an important and advantageous economic effect.

PRINCIPLES IN PLANNING THE FUTURE ROAD SYSTEM

For present purposes roads have been classified as follow:

Arterial Roads, designed to facilitate the major movement of traffic by providing the means of safe, uninterrupted and relatively rapid movement for most of a journey from point to point within the metropolitan area.

Secondary Roads, which are important roads which lead traffic to and distribute it from the arterial road system, and provide communication between centres of community activity within a limited area.

Local Roads, within the network of arterial and secondary roads, giving access to individual properties.

The road reservations in the planning scheme have been confined to those necessary for the arterial and secondary road systems. No reservations have been made for local roads, but they have been made a permissible use of all zones. They are essentially a matter for detailed local planning.

A planning scheme does not provide for the construction of works of civic improvement. It merely reserves the land necessary to permit these works being carried out when they are necessary. It is important to realise this qualification when considering provisions for roads in the planning scheme.

To fulfil its purpose a road system must be designed to accommodate the traffic likely to use it not only today but in the future. It is possible, however, to design a road so